

PROCEEDINGS OF THE ROYAL ENTOMOLOGICAL SOCIETY OF LONDON

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ORDINARY MEETING

WEDNESDAY, 3RD MAY, 1950, at 5.30 p.m.

AGENDA

1. Confirmation of the Proceedings of the Ordinary Meeting held on 5th April, 1950.
2. Recommendations of candidates for Fellowship.
3. Announcement of election of new Fellows.
4. Additions to the Library.

Presented.

Chauvin, Rémy. *Physiologie de l'insecte*. 8vo. Paris. 1949. [The Publishers.]

In addition, separates have been presented by The Commonwealth Institute of Entomology, Mr. J. B. Corporaal, Dr. T. Jaczewski, Dr. J. T. Salmon, United States Department of Agriculture, Mr. W. H. R. Lumsden, Dr. R. S. Bagnall, Mr. J. Sneyd Taylor, Mrs. V. M. Muspratt, Dr. E. Burt, Mr. M. Niblett, Freshwater Biological Association and Miss Theresa Clay.

5. Admission of Fellows.
6. Exhibits.

Fellows are particularly requested to bring suitable exhibits to the Meeting even though it may not be possible to announce their intention to do so beforehand.

Note.—To avoid congestion in the Library and to enable exhibits to be displayed to greater advantage, a table has been placed in the meeting-room for this purpose. Fellows are asked to place their exhibits on this table, with a suitable explanatory note, as soon as possible on the afternoon of the meeting, so that they are available for inspection there before the meeting opens.

7. Communications.

1. Dr. J. S. Kennedy.

Host Specificity in Aphids.

[ABSTRACT]

The host relations of phytophagous insects are usually considered in terms of the botanical relationships of the plants. Work on *Aphis fabae* Scopoli and *Myzus persicae* Sulzer indicates that the physiological condition of the plants is an equally important and indeed inseparable matter. Some plants which are colonized readily enough at certain stages of their development, are not usually at those stages when the aphids of a given species or given form within the species, are on the wing, and are not usually colonized by it for this reason only. Thus the potential host range of any aphid is probably far wider than that normally observed.

2. The President.

A Method for injecting the Tracheae and Tracheoles of Insects.

[ABSTRACT]

A simple method of evacuating and injecting the tracheal system will be described. The injection fluid consists of copper, cobalt or lead naphthenate in light petroleum ("white spirit"). This is converted to the black metallic sulphide by exposing the insect to hydrogen sulphide after injection. Tracheae and tracheoles are revealed. After fixation the tissues may be cleared and mounted in Canada balsam or sectioned and stained. Methods of bleaching dark coloured insects after injection have been devised.

A full account of the method will be published in the *Quarterly Journal of Microscopical Science*.

3. Mr. Eric M. Marsden-Jones.

The Life Cycle of *Adleria kollari* Hartig (CYNIPIDAE).

[ABSTRACT]

A description will be given of experiments proving that *Andricus circulans* Mayr is the sexual generation of *Adleria kollari* Hartig, the species which causes the formation of the Marble or Devonshire Gall on Oak. This association has long been suspected, but hitherto not proved. Reference will be made to mating and oviposition habits, and other points of interest.

TEA will be served in the Library before the meeting.

A card index of Fellows' addresses arranged on a geographical basis is now available for the use of Fellows in the Society's Rooms. Addresses in Great Britain are grouped under counties; elsewhere under Dominions, Colonies, Foreign States, etc.

ADMISSION OF FELLOWS

Any Fellow who has not been formally admitted to the Society under Chapter XIV, Section 4 of the Bye-laws and attends the meeting on 3rd May, 1950, is requested to inform the Secretary before 5.15 p.m. on that date.

PROCEEDINGS OF THE ORDINARY MEETING HELD ON 5TH APRIL, 1950.

Dr. V. B. Wigglesworth, F.R.S., President, in the Chair.

Present, 76 Fellows and 14 Visitors.

The Minutes of the Ordinary Meeting held on 1st March, 1950, were confirmed and signed by the President.

The President announced that Dr. B. P. Uvarov, C.M.G., a Fellow of the Society since 1920, had been elected a Fellow of the Royal Society. This was received with acclamation.

The President extended a welcome to Dr. Björn Petersen, Docent in the University of Uppsala, Sweden, and to Dr. Eleanor Slifer, of Iowa State University.

The names of the following candidates for election were read for the first time: Miss Belinda Kemp, Dr. Alois Malac, J. Y. Moggridge, J. A. Parry, Abdul Haq Qureshi, B.Sc., I. H. Welsh, J.P., E. C. Zimmerman.

For the second time (taken as read): F. O. Albrecht, J. A. Campbell, B.A., Ph.D., M.R.C.V.S., C. W. Coombs, J. G. Franclemont, M. T. Gillies, G. P. Holland, D. K. Kevan, F.A.C.C.A., F.R.S.E., M. S. Mani, M.A., D.Sc., F.Z.S., F.Z.S.I., R. J. Norton, B.S., M.S., C. F. Rivers, G. H. Sewell, M. McA. H. Wallace, D. J. Wood, F.R.H.S.

The Secretary read the names of the following newly-elected Fellows of the Society: O. K. Abraham, Dept. of Biology, University of Malaya, Sepoy Lines, Singapore; Dr. B. K. Behura, M.Sc., Ph.D., Thoria Sahi, Manglabagh, Cuttack 1, Orissa, India.; Dr. K. L. Boratynski, Ph.D., 13, Clarence Road, Kew, Surrey; W. A. C. Bullock, B.Sc., The Pastures, Repton, Derby; A. N. Clements, 9, Clifford Avenue, Taunton, Somerset; Capt. J. L. Cloudsley-Thompson, M.A., Dept. of Zoology, Downing Street, Cambridge; Miss J. R. Groves, B.Sc., 3, Spencer Drive, East Finchley, London, N.2.; Shaker Mohammed Hammad, B.Sc., Zoology Dept., University of Bristol; S. M. Hanson, 167, Gunnersbury Park, Popes Lane, Ealing, London, W. 5.; Miss J. Harker, M.Sc., Zoology Dept., University of Manchester; W. J. Jones, 256, Southend Arterial Road, Haroldwood, Hornchurch, Essex; N. Hasan Khan, Fernald Hall, University of Massachusetts, Amherst, Mass., U.S.A.; Dr. T. Karabag, 35, Chepstow Place, London, W. 11; W. Marr, Police Station, Kinellar, Aberdeenshire.; T. E. Mittler, B.Sc., A.R.C.S., 143, The Avenue, Sunbury-on-Thames, Middx.; C. F. dos Passos, Washington Corners, Mendham, New Jersey, U.S.A.; W. Ritson, 12, West Street, Winwick Road, Warrington, Lancs.; D. Roberts, 15, Rothwell Road, Eastwood, Essex; N. A. Saliba, Ph.C., 331, High Street, St. Paul's Bay, Malta, G.C.; A. Anantharaj Sandosham, c/o London School of Hygiene and Tropical Medicine, Keppel Street, London, W.C.1.; L. C. Scaramuzza, Entomologist, Compania Azucarera Atlantica del Golfo, Central Mercedes, Provincia de Matanzas, Cuba; C. E. Taylor, B.Sc., University of Nottingham, School of Agriculture, Sutton Bonington, Loughborough, Leics.; G. H. W. Wood, 53, Heather Drive, Dartford, Kent; Miss G. C. Williams, B.Sc., 47, Melville Road, Barnes, London, S.W.13.

Thanks were voted to donors of gifts to the Library since the last meeting.

Mr. K. U. Clarke, Miss J. R. Groves, Mr. A. E. H. Higgins, Dr. T. Karabag, Miss B. K. Macpherson, Mr. F. J. Manning and Mr. W. Rutledge signed the Obligation Book and were admitted Fellows of the Society.

The President announced that the Annual Congress of British Entomologists, organized by the Society for British Entomology, would be held at Nottingham

in July. Further details could be obtained from Captain E. Rivenhall Goffe, R.A.O.C., Winton Cottage, King's Somborne, Hants.

The Rev. E. J. Pearce exhibited and commented on drawings of the aedeagi of the British species of *Bibloplectus* (Col. PSELAPHIDAE). He said that these were the first drawings that were known to him of this structure in this genus; and that the homology and morphology of the organ raised difficult questions about which he sought enlightenment. The seven British species (including three apparently new to science) all had markedly different-shaped aedeagi, showing a series leading from a simpler type up to an extremely complicated one.

Dr. Hugh Scott mentioned that Dr. R. Jeannel of the Paris Museum had in the press a large work on the PSELAPHIDAE which might throw light on some of the problems encountered by Mr. Pearce.

Mr. C. F. Rivers, a visitor, exhibited living *Thais polyxena* and pupae, and called attention to the spines at the anterior end of the latter and to the cremaster, both of which apparently serve the purpose of securing the pupa in its cocoon.

The President said that, as announced on page 12, Dr. Zimmerman would give the second of his series of papers on the origin, distribution and development of island life in the Pacific. He reminded Fellows that Dr. Zimmerman, who was on the staff of the Hawaiian Sugar Planters' Association, had made a special study of faunistic entomology, and was now on an extended visit to this country.

Before reading his paper, Dr. Zimmerman paid tribute to the contributions made to our knowledge of the Hawaiian insect fauna by Dr. R. C. L. Perkins, and the late Frederick Muir and G. W. Kirkaldy, all British entomologists who were members of the staff of the Experiment Station, Hawaiian Sugar Planters' Association, an institution well known for its support of basic research which had achieved its ends in the control of sugar cane pests with biological methods instead of insecticides.

In the discussion following the talk the speaker said, in reply to an enquiry by Dr. T. H. C. Taylor, that the line marking the eastern limit of rocks of continental type in the Pacific ran just east of Fiji, and the Polynesian islands east of the line were all oceanic islands with basaltic rocks only. Fiji had rocks of well marked continental or metamorphic type.

Dr. Taylor remarked that he now considered that the Zygaenid moth, *Levuana iridescens*, of Fiji, which had hitherto been regarded as an introduced species there, although it had never been found elsewhere, was, in fact, endemic there. This, if true, was an interesting instance of an insect species that was entirely confined to a single island. Dr. Zimmerman, having drawn a parallel from the discontinuous distribution of Megapod birds, which had a species on isolated Niuafoou Island, Professor Buxton pointed out that this could not be quoted as a comparable case, as birds were more closely associated with man, and their eggs could be hatched independently of the parent. Dr. Zimmerman said that the Niuafoou megapod was a distinct and peculiar species which was there before the Polynesians came, perhaps little more than 800 years ago, hardly time for the development of a new bird species.

Mr. R. J. A. W. Lever said that on returning to the Solomons after working for a period in Fiji, he had been struck by the diversity of the insect fauna. The fauna, as demonstrated in the lecture, faded away visibly towards Samoa, and at Easter Island almost disappeared. He mentioned that some beetles and frogs just reached Fiji at the extreme eastern edge of their range.

Professor G. D. Hale Carpenter appealed for specimens of *Euploea* butterflies, with accurate locality data, from the out-of-the-way Pacific islands. The study he was making of the distribution of this genus in the Pacific confirmed Dr. Zimmerman's theories.

Professor G. C. Varley said that Dr. Zimmerman's paper presented two major points of interest: (1) how the fauna arrived, which had been explained, and (2) by what process the single immigrant species had evolved into large numbers of species. He wondered whether the explanation involved dodging from island to island. He himself had formed the impression from an analysis of the data on the homopterous genus *Nesophrosyne*, in the speaker's recent work on the Fauna of Hawaii, that one or two species occurred on individual islands. Where two species occurred they had different food-plants. Dr. Zimmerman said that a detailed explanation of the processes of evolution would form the substance of his next communication.

Dr. B. Petersen, a visitor, said that in Finland insect groups had been spread by the waves or by air when barometric pressure was high, and referred to the papers by Frey and Palmén in *Ann. Soc. Zool.-Bot. Fennicae, Vanamo*, in 1937 and 1944, on this subject.

Mrs. K. J. Richardson suggested that in overseas distribution the advantage was with the wingless insect, the winged insect tending to leave driftwood, for example, through being able to fly independently.

Mr. E. S. Brown commented on the reference to the absence of native aphids from Hawaii, especially as these insects were commonly carried by wind. Dr. Zimmerman said that aphids were characteristically not a tropical group, and perhaps their absence from Hawaii also had something to do with their soft and fragile bodies not being able to survive dispersal over great distances. He pointed out the interesting fact that the introduced aphids in Hawaii produced only the viviparous female forms, male aphids and eggs being unknown in Hawaii.

N. D. RILEY, *Honorary Secretary.*

The next meeting will be held on 7th June, at 5.30 p.m.

NOTICES

In addition to the *Transactions and Proceedings* (Series A, B and C), the following publications are available on application at the Society's rooms:—

THE GENERIC NAMES OF BRITISH INSECTS, WITH CHECK LISTS OF THE SPECIES, prepared by the Committee on Generic Nomenclature of the Royal Entomological Society of London, with the assistance of the Department of Entomology of the British Museum (Natural History):—

Part. 1. Recommendations relating to the publication of the Committee's										Price	
	Reports	..	..	..	..	..	..	..	..	3s.	6d.
„	2. Rhopalocera	..	..	..	..	..	..	..	..	„	3s. 6d.
„	3. Odonata	..	..	..	..	..	..	..	..	„	3s. 6d.
„	4. Neuroptera	..	..	..	..	..	..	..	..	„	3s. 6d.
„	5. Hymenoptera	..	..	..	..	..	..	..	..	„	15s. 0d.
„	6. Coleoptera Carabidae	..	..	..	..	..	..	..	..	„	10s. 0d.
„	7. Coleoptera Hydradephaga	..	..	..	..	..	..	..	..	„	5s. 0d.
„	8. Hemiptera Heteroptera	..	..	..	..	..	..	..	..	„	39s. 0d.
„	9. Coleoptera Staphylinidae	..	..	..	..	..	..	..	..	„	40s. 0d.

HANDBOOKS FOR THE IDENTIFICATION OF BRITISH INSECTS.

The Society has undertaken the issue of a series of publications intended to provide illustrated Keys to the whole of the British Insect Fauna so far as this is possible.

It is proposed to cover this field in a series of ten volumes, arranged as follows:—

I. Part 1. General Introduction.	Part 9. Ephemeroptera.†
„ 2. Thysanura.	„ 10. Odonata.†
„ 3. Protura.	„ 11. Thysanoptera.*
„ 4. Collembola.*	„ 12. Neuroptera.
„ 5. Dermaptera and Orthoptera.†	„ 13. Mecoptera.
„ 6. Plecoptera.†	„ 14. Trichoptera.
„ 7. Psocoptera.*	„ 15. Strepsiptera.
„ 8. Anoplura.	„ 16. Siphonaptera.
II. Hemiptera.*	
III. Lepidoptera.	
IV and V. Coleoptera.*	
VI. Hymenoptera: Symphyta* and Aculeata.*	
VII. Hymenoptera: Ichneumonicoidea.*	
VIII. Hymenoptera: Cynipoidea, Chalcidoidea and Serphoidea.	
IX. Diptera: Nematocera† and Brachycera.	
X. Diptera: Cyclorrhapha.*	

The following parts are now available:—

- Vol. I, Part 5. Dermaptera and Orthoptera. By W. D. Hincks. Price 3s. 6d. plus postage.
 Vol. I, Part 10. Odonata. By F. C. Fraser. Price 7s. 6d. plus postage.
 Vol. IX, Part 1. Diptera: Introduction and Key to Families. By H. Oldroyd. Price 7s. 6d. plus postage.

Parts marked † are on sale or in the press, those marked * in preparation.

Orders for the complete series or for separate parts can be placed with the Registrar at the Society's rooms now, but prices can only be quoted for those parts already issued.

Fellows of the Society may purchase one copy at a discount of 25 per cent.; additional copies at the full published price.

STYLOPS, a Journal of Taxonomic Entomology.

1932-1935. Vols. 1-4 (all issued). Price £1 16s. 0d. each; to Fellows £1 7s. 0d.

ABSTRACT OF PROCEEDINGS OF THE ROYAL ENTOMOLOGICAL SOCIETY OF LONDON. 1935. Nos. 1-6 (all issued). 3s. 0d.

HUBNER: A BIBLIOGRAPHICAL AND SYSTEMATIC ACCOUNT OF THE ENTOMOLOGICAL WORKS OF JACOB HUBNER AND THE SUPPLEMENTS THERETO. In 2 vols. By Francis Hemming. Price Vol. 1. 605 pp. £1 15s. 0d.; Vol. 2. 275 pp. 15s. 0d.

THE HISTORY OF THE ENTOMOLOGICAL SOCIETY OF LONDON, 1833-1933. By S. A. Neave, assisted by F. J. Griffin. Price 10s. 6d.

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